



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

KYLE GLENN CROSS

Serial No.: 09/910,966

Filed: July 23, 2001

For: DECORATIVE TRANSFER PROCESS

Attorney Docket No.: STA 0301 PUS

Group Art Unit: 1774

Examiner: B. Shewareged

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APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
U.S. Patent & Trademark Office
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Alexandria, VA 22313-1450

Sir:

Appellants appeal the final rejection of claim 24 - 28 of the Office Action dated June 4, 2003. A Notice of Appeal was filed, with Extension of Time, on October 17, 2003.

I. REAL PARTY IN INTEREST

The real party in interest is Stahls, Inc., by virtue of Assignment recorded at Reel 7901, Frame 0360.

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II. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 16 - 33 are pending in this application. Claims 16 - 23 and 29 - 33 have been withdrawn from consideration. Appellants appeal from the rejection of claims 24 - 28, the claims currently under examination.

IV. STATUS OF AMENDMENTS

Claim amendments were presented following the Final Rejection dated June 4, 2003, however the amendments were not entered. Therefore, the claims are of the scope presented in Appellant's response dated March 7, 2003 (Certificate of Mailing date). A copy of the claims is appended hereto.

V. SUMMARY OF THE INVENTION

The subject invention pertains to a transfer containing a computer generated graphics image (page 11, ¶1) suitable for transfer onto a fabric garment by application of heat and pressure by contacting the image-containing surface of the transfer with a textile under sufficient heat and pressure to transfer the image to the textile, the textile retaining the hand and feel after image transfer (page 5, lines 8 - 13, page 13, lines 2 - 5, claims 9 and 10 as filed), said transfer comprising a planar substrate, optionally coated with a non-fusible release coating, and free of fusible polymer (page 12, last ¶, claims 1 as filed), and a graphics image consisting essentially of particles of a dried fusible polymer ink (page 13, ¶2, claim 1 as filed), said graphics image printed

onto said substrate by means of an inkjet printer containing at least one ink-jet cartridge containing particles of said fusible polymer ink (page 13, ¶¶ 2, 3; claim 1 as filed), said printer controlled by a computer-readable graphics file input to said printer (page 11, ¶1; claim 9 as filed) said graphics image printed onto one surface of said substrate, said transfer containing no fusible polymer other than the fusible polymer of said fusible polymer ink (pages 11 - 12; claim 1 as filed).

VI. ISSUES

The issue may be succinctly stated as follows:

Is the claimed invention obvious within the meaning of 35 U.S.C. § 103(a) over Kronzer, U.S. patent 4,863,781 ("*Kronzer*"), when *Kronzer* requires a fusible polymer layer, and the claims exclude such a layer?

VII. GROUPING OF CLAIMS

The claims do not stand or fall together. Claim 25 is separately patentable in view of the arguments presented by the Examiner during prosecution, and even should, *arguendo*, claims 24 and 26 - 27 be found unpatentable, claim 25 would still be patentable, as claim 25 requires that the substrate be paper with no polymeric coating. Thus, claims 24, 26 and 27 stand or fall together, and claim 25 is separately patentable.

VIII. ARGUMENT

The present invention pertains to graphics transfers. Graphics transfers have long been used to transfer graphics to substrates. One common use is the transfer of athletes' names

onto jerseys used in sporting events such as soccer, football, and basketball. Another common use is the production of awnings and the like bearing business names, logos, etc. The transfers generally consist of a pigment layer and an adhesive layer on a substrate, the adhesive layer being outermost. The pigment, adhesive, and substrate generally supplied as a continuous roll product, or sheets cut therefrom, and a computer-driven knife slices through the adhesive and pigment layers but not the substrate, in the form of the desired image. Non-image portions are then "weeded away", and the substrate, now bearing the image (in reverse), is contacted with fabric under heat and pressure. The adhesive bonds the image to the fabric, and the substrate is then peeled off.

For complex images such as reproductions of photographs or complex graphics, designs were screen printed onto a substrate and then overcoated with adhesive. However, the screen printing process is an operation which cannot be performed in small establishment such as kiosks in shopping malls. While transfers were originally produced only in a transfer producing facility, a demand was created for easier and more rapid access to graphics on items such as t-shirts, sweat shirts, and the like. Small establishments would stock a supply of commonly used graphics such as common names, names of universities, and the like. Recently, there has been a demand for "on the spot" graphics designs, including reproduction of photographic images. Dye sublimation printers have been used for such purposes, but tend to be expensive both in terms of the capital equipment and the continuous dye sublimation "ribbons" which must be used. These dyes are not effective with fabrics such as cotton, which are not readily dyed by sublimation dyes. The alternative was to print a graphics image with traditional inks onto a fusible polymer-coated substrate (in reverse). The substrate with the image was then transferred to a fabric under heat and pressure. The fusible polymer, with the image thereon, fuses to the fabric, the polymer layer outermost. The resulting hand and feel of the garment is altered, being stiff and "boardy", even over areas where the image is not present, since the image cannot be weeded away as is the case with solid color transfers (i.e. names, etc.).

Appellant has surprisingly discovered that ink jet printers are capable of delivering fusible polymer ink instead of the conventional ink these printers generally use. A computer is used to generate a printable graphics file, and the printing takes place onto a substrate devoid of fusible polymer, to form a graphics transfer. The transfer is then contacted with a fabric (i.e. hat, garment, etc.) under heat and pressure, and the image fuses to the fabric. Because the transfer is devoid of fusible polymer other than the polymer ink, only the ink is transferred to the textile, and its hand and feel are thus substantially unaltered. For example, a color photograph of a child may be scanned and printed with polymer inks onto plain paper, and the image-coated paper contacted with a t-shirt under heat and pressure in a conventional transfer press. The paper is then peeled away, leaving a color image of the child on the shirt, without the image being partially obscured by a polymer coating, and with a hand and feel similar to that of the t-shirt prior to transfer printing. The prior art fails to teach or suggest this process, nor does it teach or suggest a transfer suitable for use therein.

All the claims, including claim 25, require that the transfer contain no fusible polymer other than the fusible polymer ink. *See* claim 24, last two lines.

Kronzer discloses a conventional transfer, i.e. one with a fusible polymer film which is kiss-cut and the non-image portions weeded away, or optionally printed by "conventional" techniques (column 5, lines 48 - 52) such as rotogravure or silk screen printing. To one skilled in the art, printing by ink jet is not conventional. Prior to Appellant's discovery that ink jet printers could print fusible graphics images, this technique was never used, to Appellant's knowledge. The improvement disclosed and claimed by *Kronzer* was to include a fusible polymer "conformable layer", i.e. 18 in Figure 1, 120 in Figure 2, and 320 and 420 in Figure 4. *Kronzer* indicates that his "conformable layer" softens and flows during the transfer operation, i.e. under the heat and pressure of a transfer press (column 6, lines 43 - 48). Thus, in order to flow, the conformable layer must be fused, or "melted."

The claims under examination require the transfer to be free of fusible polymer. On page 12 of the specification, “fusible polymer” is defined as follows:

By the term “fusible polymer” is meant a polymer which will fuse at the temperature to which the article to be printed with the transfer is processed, or cure to a non-removable cured state.

The conformable layer of *Kronzer* clearly meets this definition.¹ The entire thrust of *Kronzer* is directed to including this fusible layer, and thus *Kronzer* clearly cannot disclose, teach, or suggest a transfer devoid of a fusible layer. Claims 24 - 28 are clearly non-obvious over *Kronzer*.

The Examiner states that Appellant’s transfers do not exclude a conformable layer because of their use of the “comprising” transitional phrase. *See, e.g.* page 2 of the Advisory Action of September 17, 2003. However, that is incorrect. “Comprising” allows layers such as barrier layers, release coating layers, etc., but does not allow a conformable layer, because the claim specifically and clearly prohibits the presence of such a layer: “said transfer containing no fusible polymer other than the fusible polymer of said fusible ink.”

Claim 25 is yet more specific, requiring a paper substrate with no polymer coating of any kind. *Kronzer* clearly requires a conformable polymer coating.

Reversal of the rejections of claims 24 - 28 over *Kronzer* is solicited.

¹ It is noted that the term “transfer” is the term which applies to the entire article of the claims, i.e. substrate, fusible polymer ink, and any other layers, i.e. barrier layers, release coating, etc.

The fee of \$320.00 as applicable under the provisions of 37 C.F.R. § 1.17(c) is enclosed. Please charge any additional fee or credit any overpayment in connection with this filing to our Deposit Account No. 02-3978. A duplicate of this notice is enclosed for this purpose.

Respectfully submitted,

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Enclosure - Appendix

IX. APPENDIX - CLAIMS ON APPEAL

Claims 1 - 15. (Cancelled)

Claims 16 - 23. (Withdrawn)

24. A transfer containing a computer generated graphics image suitable for transfer onto a fabric garment by application of heat and pressure by the process of claim 16, said transfer comprising:

(a) a planar substrate, optionally coated with a non-fusible release coating, and free of fusible polymer;

(b) a graphics image consisting essentially of particles of a dried fusible polymer ink, said graphics image printed onto said substrate by means of an ink-jet printer containing at least one ink-jet cartridge containing particles of said fusible polymer ink, said printer controlled by a computer-readable graphics file input to said printer, said graphics image printed onto one surface of said substrate, said transfer containing no fusible polymer other than the fusible polymer of said fusible polymer ink.

25. The transfer of claim 24, wherein said substrate comprises paper with no polymeric coating.

26. The transfer of claim 24, wherein said substrate comprises a plastic film.

27. The transfer of claim 24, wherein said substrate is paper, and said optional non-fusible release coating is present.

28. The transfer of claim 24, wherein said fusible polymer ink comprises a vinyl plastisol ink.

Claims 29 - 33. (Withdrawn)